COA DEVELOPMENT

FM 3-09.21

“In times of change...

Learners inherit the earth,

While the learned

Find themselves beautifully equipped

to deal with a world

that no longer exists.”

Erik Hoffer

COA DEVELOPMENT

In a DS FA battalion, the FSCOORD and FS personnel participate in the maneuver unit COA development and FA fire planning is an integrated part of the maneuver MDMP. In all FA units, the staff analyzes possible FA COAs to determine the best COA to support the higher HQ mission. This effort often begins when the first WARNO is received. Each FA COA must be **feasible** (able to be accomplished with current or projected resources), **acceptable** (contains acceptable levels of risk), **suitable** (consistent with the commander's guidance and intent), **distinguishable** (if more then one), and **complete** (answers who, what, when, where, why,

- **Who** - The type of unit supported.
- **What** - The type of operation supported and EFATs for the battalion.
- **When** - The time action will begin or must be completed by (e.g, on-order, D-day, H-hour, or specific DTG for artillery FS activities).
- **Where** - The assigned AO, such as PAs and routes, in the supported unit sector.
- **How** - The method the FA battalion will use to conduct or execute its EFATs in support of the operation.
- **Why** - The purpose of FA fires, and/or fires in general, in support of the mission.

The COAs that a FA battalion will develop and evaluate will address the various methods or options that the FA unit has to accomplish its mission and tasks. These may include different movement plans, tactical or technical FD controls (fire mission routing, sensor-to-shooter links, as examples), task allocations, positioning, logistics plans, or other aspects of FA operations. The FA battalion is not evaluating the maneuver or force FA HQ COAs, but rather its ability to support the operation. One technique for developing a FA COA includes:

- Review EFSTs and supporting EFATs.
- Task subordinate units (who, what, when, where, why — and how, if time constrained).
- Determine command post and trains configuration.
- Address fundamentals of the battlefield operating systems (BOS) (for CSS, it could be the tenets of CSS; for FA, it could be the five requirements for accurate, predicted fire).
- Task organic sections (usually part of the headquarters element). Again, indicate the who, what, where, when, and why.
- Graphically and/or verbally explain the COA, ensuring every specified and implied task is

ANALYZE RELATIVE COMBAT POWER, FACTS, AND ASSUMPTIONS

First, the S2 focuses on artillery ratios to help determine what assets are needed to accomplish EFATs. By analyzing FA ratios and determining and comparing each force's FA strength and weakness as function of combat power, the staff can gain some insight into friendly FA capabilities in support of the operation. The analysis can also reveal what FA operation may be possible from both a friendly and an enemy perspective and FA vulnerabilities (friendly and enemy). (The FS estimate conducted by the FSE or supported unit should be the start point or extension for this analysis. The FA S2 must also understand the overall relative combat power assessment

GENERATE OPTIONS

Based on this analysis and the FA commander's guidance, the staff generates options for FA COA development in support of the mission. Brainstorming is the preferred technique for generating options. Once the staff has explored various concepts, they should examine each to determine if it satisfies COA selection criteria.

BRAINSTORMING

Brainstorming is the use of imagination and intuition to create ideas spontaneously. When thinking about a problem, you just let something pop into your mind without reflecting on it. A subconscious thought may emerge that wouldn't have, had you solely relied on your intellect. Brainstorming also enables members to hitchhike ideas. An idea emerges, someone else thinks of something to build on it.

ARRAY INITIAL FORCES

The S3 and S2 should integrate the SITEMP into the COA development. The S3 overlays the SITEMP on the operations map and deconflicts positioning of firing units, critical nodes, and radar positions given the impending situation. The S3 ensures that PAs are not on enemy AOAs, regimental objectives, or other conflicting areas. It is very difficult to position out of range of the threat's artillery so the S3 should consider positioning units in areas that will cause artillery delivery problems for the enemy's artillery systems (e.g, sight to crest, intervening crest, and traverse limit problems). The staff conducts this process to eliminate PAs that do not meet the above criteria. Given the remaining PAs, the S3 can now narrow the focus of FA COAs to support the mission.

DEVELOP THE SCHEME OF MANEUVER (MOVEMENT PLANS)

The S3 section posts the MCOO on the operations map underneath the operations graphics overlay. The O&I section plots the HPTs or critical target areas (areas where the supported commander plans to engage HPTs, TAIs, chokepoints, NAIs, trigger points, etc.) by phase based on the HPTL, fire plans, templates, etc. The BAO and/or FDC provides the S3 with ammunition information (types and quantities of propellants, projectiles, rockets, missiles) for the upcoming mission.

DEVELOP THE SCHEME OF MANEUVER (MOVEMENT PLANS) (CONT)

With this information the S3 and BAO determine which munitions mix is available in the greatest amounts. The S3 uses the range of the greatest percentage of propellant/shell (rocket/missile) mix available to the battalion to determine the planning range. This process avoids a common pitfall--using the wrong planning range to choose PAs. This information, passed through FSO channels, also provides the maneuver commander with the predominant range capability of his FS systems.

DEVELOP THE SCHEME OF MANEUVER (MOVEMENT PLANS) (CONT)

Using the correct planning range, the S3 draws range fans starting from the HPTs or critical target areas back to the proposed PAs. All PAs on the MCOO that are inside these range fans are identified as optimal PAs to engage HPTs or critical target areas. PAs outside of the range fans are identified as less than optimal. Units in less than optimal PAs will be required to expend propellants and munitions that are in short supply (e.g, rocket assisted projectiles [RAP]) to range the target area. During this process the FDO refines the optimal ranges given the conditions of accurate predicted fires.

DEVELOP THE SCHEME OF MANEUVER (MOVEMENT PLANS) (CONT)

Once the S3 identifies the optimal PAs for each target area, by phase, he copies them onto the operations overlay. There are times when the S3 must use less than optimal PAs and he does so understanding the constraints of those PAs. The FDO looks at each PA and identifies any technical fire delivery issues (e.g, site to crest, intervening crest, traverse limits) that must be resolved. When any of these issues are identified, the FDO should shoot a "dry" mission in the computer using data from the PA to determine if the identified concerns are valid. If the S3 directs occupation of any of these PAs, the FDO addresses these identified issues with the battery

DEVELOP THE SCHEME OF MANEUVER (MOVEMENT PLANS) (CONT)

The S3 (and brigade FSO) should perform a quality control check of the FA/FS scheme of maneuver to ensure it addresses:

- Battery/TOC/CSS movement plans, at least into primary positions.
- Alternate and supplementary positions.
- Azimuths of fire and planning range fans.
- EFST/EFAT requirements and key subordinate tasks.
- R&S requirements (radar support and coverage areas).
- Survey, met, engineer, and ADA support.
- C2 and CSS plans.
- Priorities of support.

PREPARE COA STATEMENTS AND SKETCHES

The S3 prepares a COA statement and supporting sketch (containing PAs, movement plan, FSCMs, planning range fans, radar coverage, listing of EFATs, etc.) for each possible FA COA. Together, the statement and sketch should cover who, what, when, where, how, why, and any significant risks. At this point, the S3 should have well defined EFATs, each containing a specific task, its purpose, method of accomplishment, and task effects (desired results).

BRIEF COMMANDER AND REFINE COA

After the COAs have been developed, they are briefed to the commander for review. After the briefings the commander gives any additional guidance. If he rejects all COAs, the staff must begin again. If he accepts one or more of the COAs, they begin the wargaming process. The COA briefing may include:

- Update intelligence.
- Possible enemy employment of FA assets (SITEMP).
- The restated mission.
- The supported commander's intent for FS/FA.
- The COA statement and sketch.
- The rationale for each COA.

SUBJECT TO YOUR QUESTIONS?

"It is by will alone I set my mind in motion. it is by the juice of sapho that thoughts acquire speed, the lips acquire stains, the stains become a warning. it is by will alone I set my mind in motion." - Mentat saying (Dune series) -- Frank Herbert.

"It is by coffee alone I set my mind in motion, it is by the beans of java that thoughts acquire speed, the hands acquire trembling, the trembling becomes a warning. it is by coffee alone I set my mind in motion" - Seen in military UseGroup, author unknown.